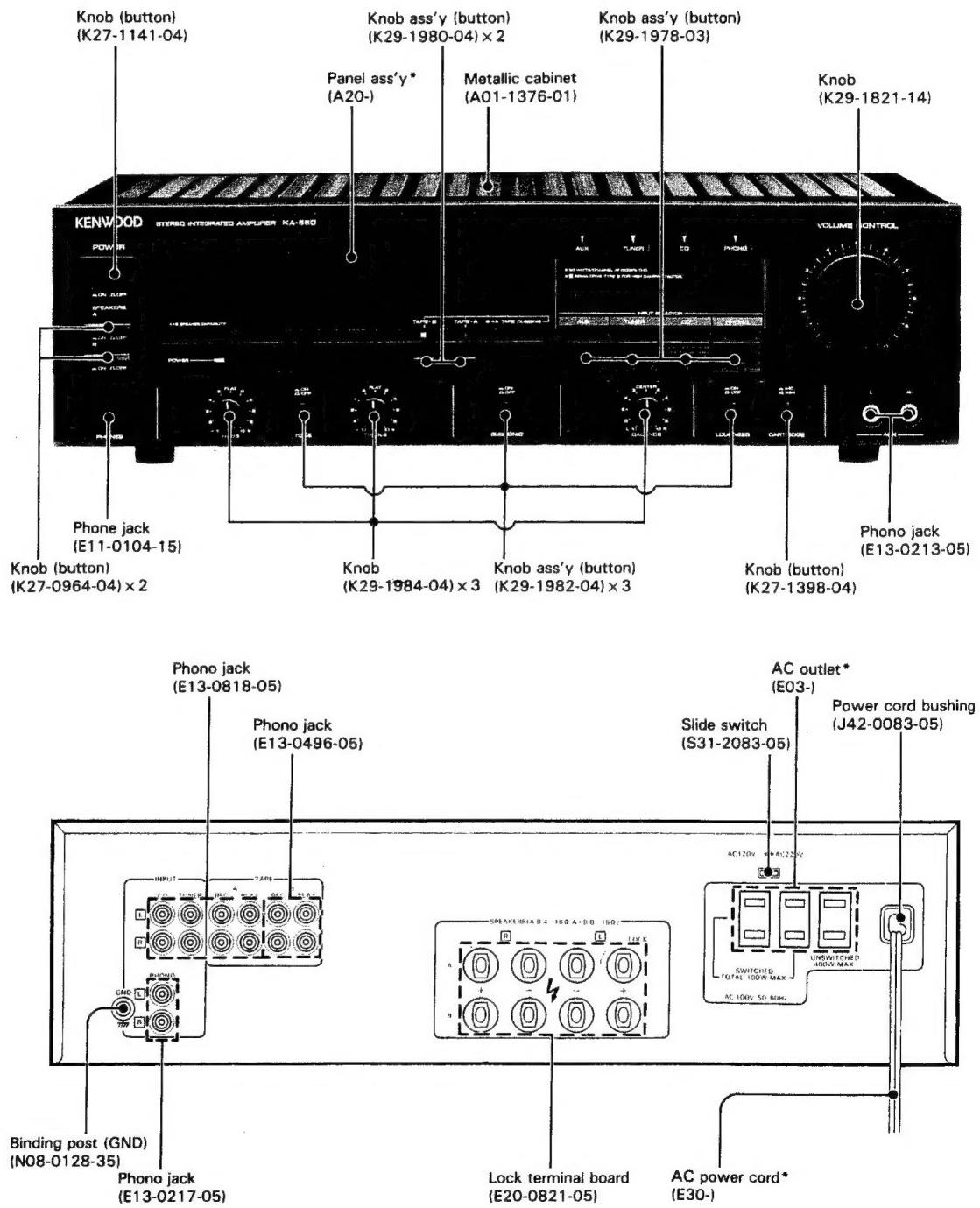


KA-660

KENWOOD

STEREO INTEGRATED AMPLIFIER

MANUAL
SERVICE



*Refer to Parts List on page 6.

DISASSEMBLY FOR REPAIR

REPLACEMENT OF PARTS ON AUDIO UNIT

1. Remove 2 screws at the chassis R (unified with the bottom plate) (①) and 3 screws at the rear panel (②).

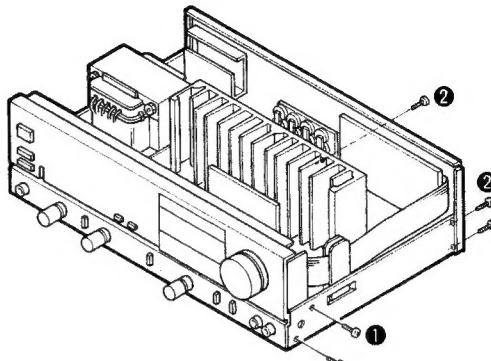


Fig. 1

2. Remove 6 screws at the bottom plate (③).
3. Slide and remove the bottom plate as shown by the arrow, being aware that parallel flat cable is sandwiched by pc boards (④).

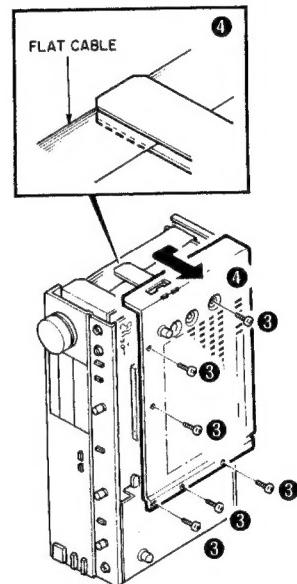


Fig. 2

REPLACEMENT OF PARTS ON MAIN AMP UNIT

4. Pull off BASS, TREBLE and BALANCE knobs (⑤).
- Remove 3 screws at the top of the panel ass'y (⑥).
5. Remove 4 screws at the sides of the chassis, 2 on each side, (⑦) and 3 screws at the bottom side of the panel ass'y (⑧).

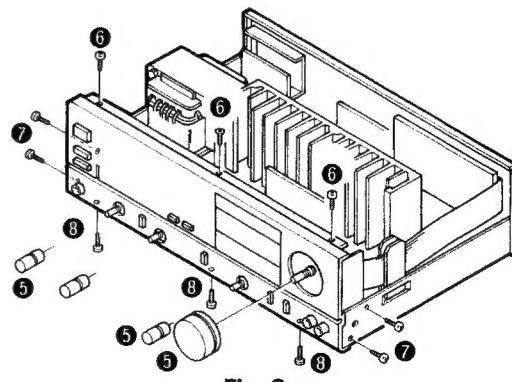
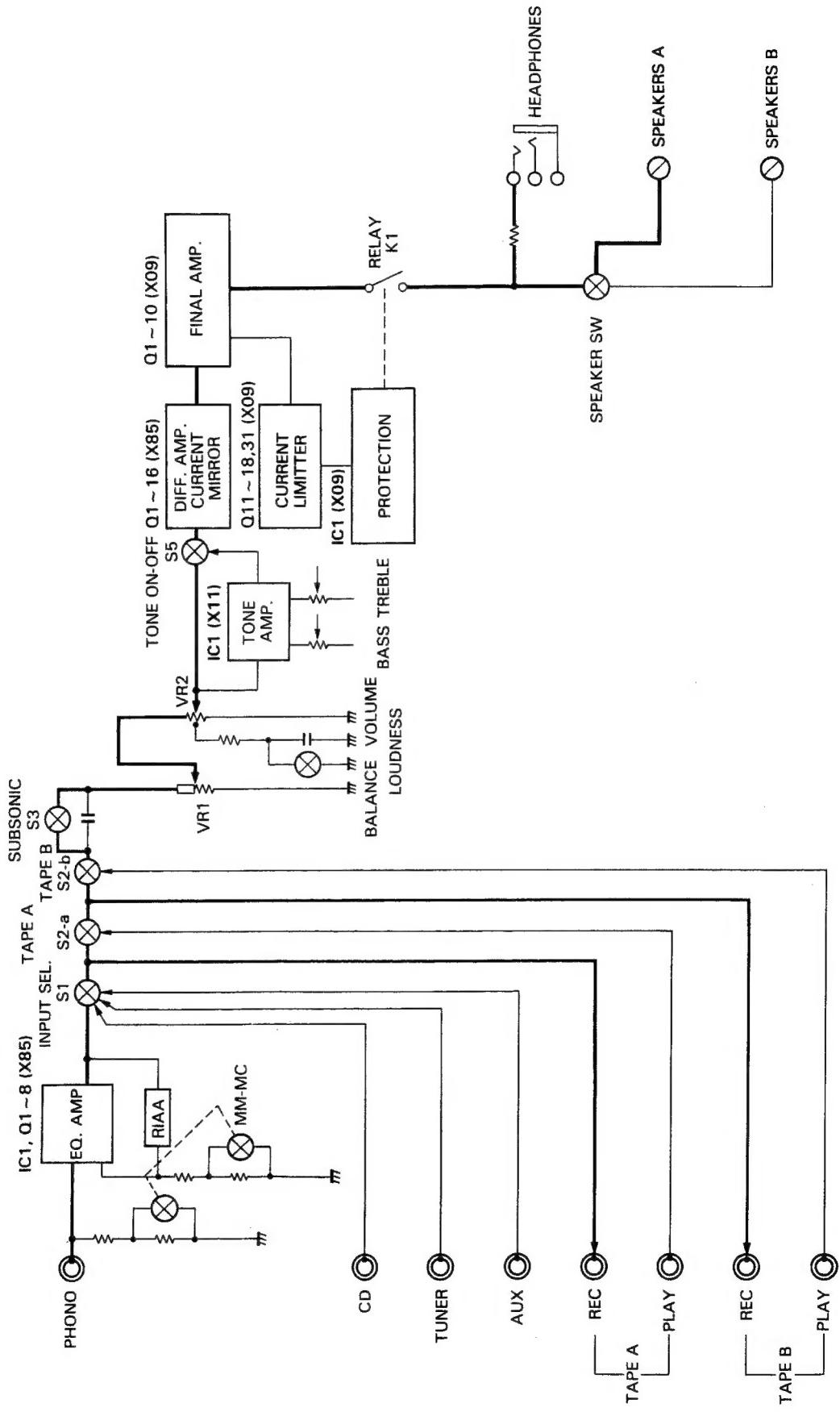


Fig. 3

BLOCK DIAGRAM



6. Disconnect parallel cords from their connectors and take the panel ass'y frontward (⑨ , ⑩).

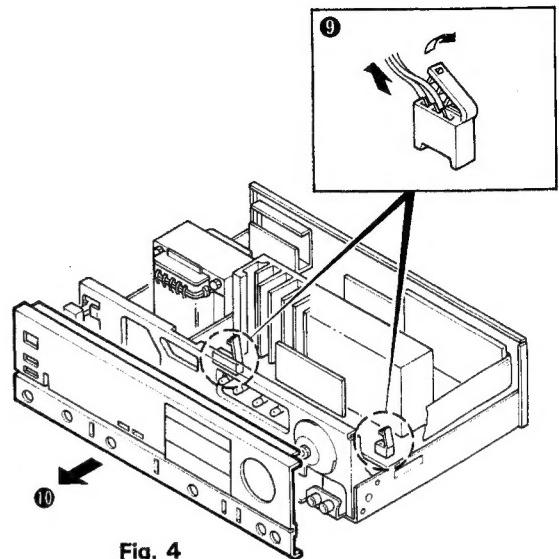


Fig. 4

REPLACEMENT OF FLAT CABLE

7. Pull both ends of the connector ends (⑪). Pull out the flat cable (⑫).
8. When plugging in the flat cable be sure the both ends are pulled up (⑬).
9. After the flat cable has been inserted, all the way, push the both ends of the connector (⑭). Make sure the flat cable is secured in the connector.

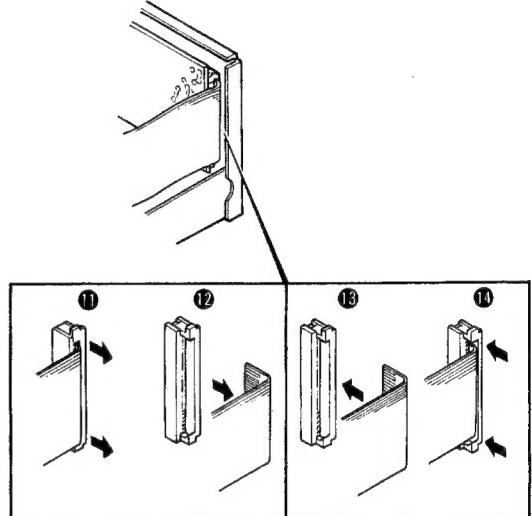


Fig. 5

REPLACEMENT OF PARTS ON CONTROL UNIT

10. Remove 2 screws retaining the escutcheon of the INPUT SELECTOR (⑮).
11. Pull the knobs off (⑯).
- (Caution) **Pull the knobs off at switch-off position. Pulling off at switch-on position will cause a lock malfunction. This switch is a short stroke type switch and for this reason, switch on-off position is not easily distinguished.**
12. Remove 4 hexagonal nuts from the potentiometers (⑰).
13. Remove 2 screws retaining the selector switch (⑱).
14. Pull the sub chassis forward (⑲).
15. Remove 2 push rivets retaining the pc board (⑳).

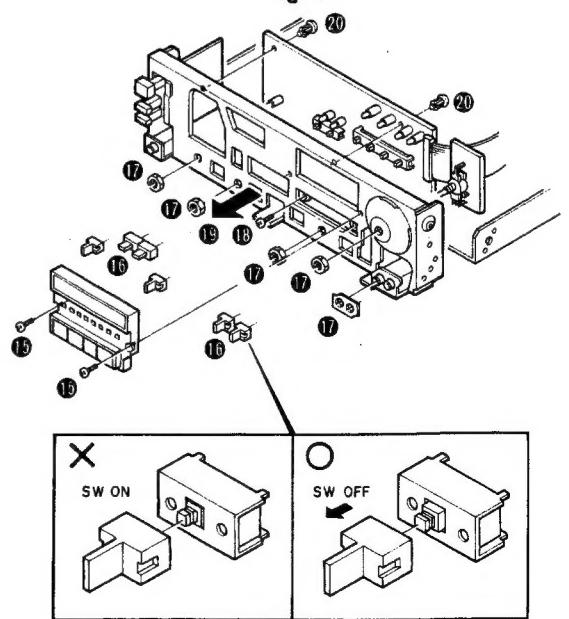


Fig. 6

CIRCUIT DESCRIPTION
PRE-AMP UNIT (X85-1010-10)

Components	Functions	Operations (Substitutions)
	Cascade amp.	
Q5-8	EQ circuit first-stage differential amp	
IC1	EQ circuit op-amp IC	

CONTROL UNIT (X11-2130-10)

Components	Functions	Operations (Substitutions)
IC1	Tone circuit op-amp	

AUDIO UNIT (X09-2130-10)

Components	Functions	Operations (Substitutions)
Q1, 2	Bias	
Q3-6	Driver	(2SA913, 2SC1913)
Q7-10	Final	
Q11-18, 31	Current limiter	Final protection circuit (Q17,18 for hight voltage resistance) for over-load drive.
Q32, 33	Voltage regulator circuit	Voltage regulation circuit inserted into the B line towards the EQ circuit. (2SA1110, 2SC2590)
Q34, 35	PHONO shock noise prevention circuit Muting	When the B voltage of the EQ circuit drops by switching power ON, and when the drop of the -B voltage is slower than that of +B, chemical capacitors C27 and C28, which are inserted in the EQ and NF circuits, are changed and the time between the power ON and the stabilization of output in terms of DC increases. This circuit prevents shock noise or relay which could occur when MM/MC is switched later.
IC1	Protection IC	This circuit disconnects the relay when the amp is malfunctioning.
D11-14	Rectifier	(GP25, U05C (S))
D18, 19	AVR for increasing the voltage.	(RD22J (B), RD20J (B))
D22, 23	AVR for EQ.	(RD20J (B2))
D3, 4	Thermal compensation	

MAIN AMP UNIT (X85-1050-10)

Components	Functions	Operations (Substitutions)
Q1-4	Class A 1st stage differential amp	
Q5-8	2nd stage differential amp	
Q9, 10	Class A amp	
Q11-14	3rd stage differential amp	(2SC1904)
Q15, 16	Current mirror circuit	(2SA899)

ADJUSTMENT/REGLAGES/ABGLEICH
ADJUSTMENT

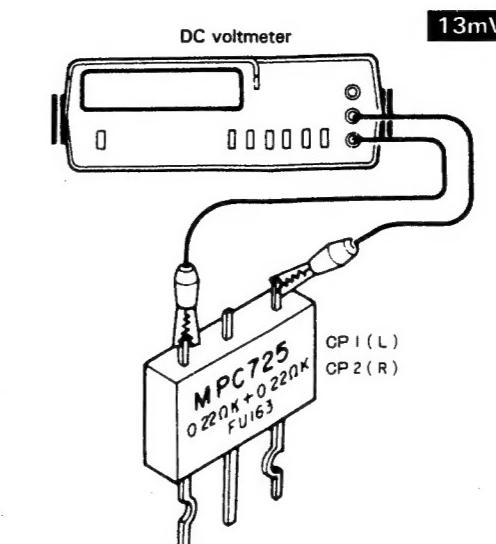
No.	ITEM	INPUT SETTINGS	OUTPUT SETTINGS	AMPLIFIER SETTINGS	ALIGNMENT POINTS	ALIGN FOR	FIG.
1	IDLE CURRENT	-	Connect a DC voltmeter across CP1 (L) CP2 (R).	VOLUME: 0	VR1 (L) VR2 (R)	13mV	

REGLAGE

N°	ITEM	REGLAGE DE L'ENTREE	REGLAGE DE LA SORTIE	REGLAGE DE L'AMPLIFICATEUR	POINS L'ALIGNEMENT	ALIGNER POUR	FIG.
1	COURANT DE POLARISATION	-	Connecter un voltmètre CC sur CP1 (G) CP2 (D).	VOLUME: 0	VR1 (G) VR2 (D)	13mV	

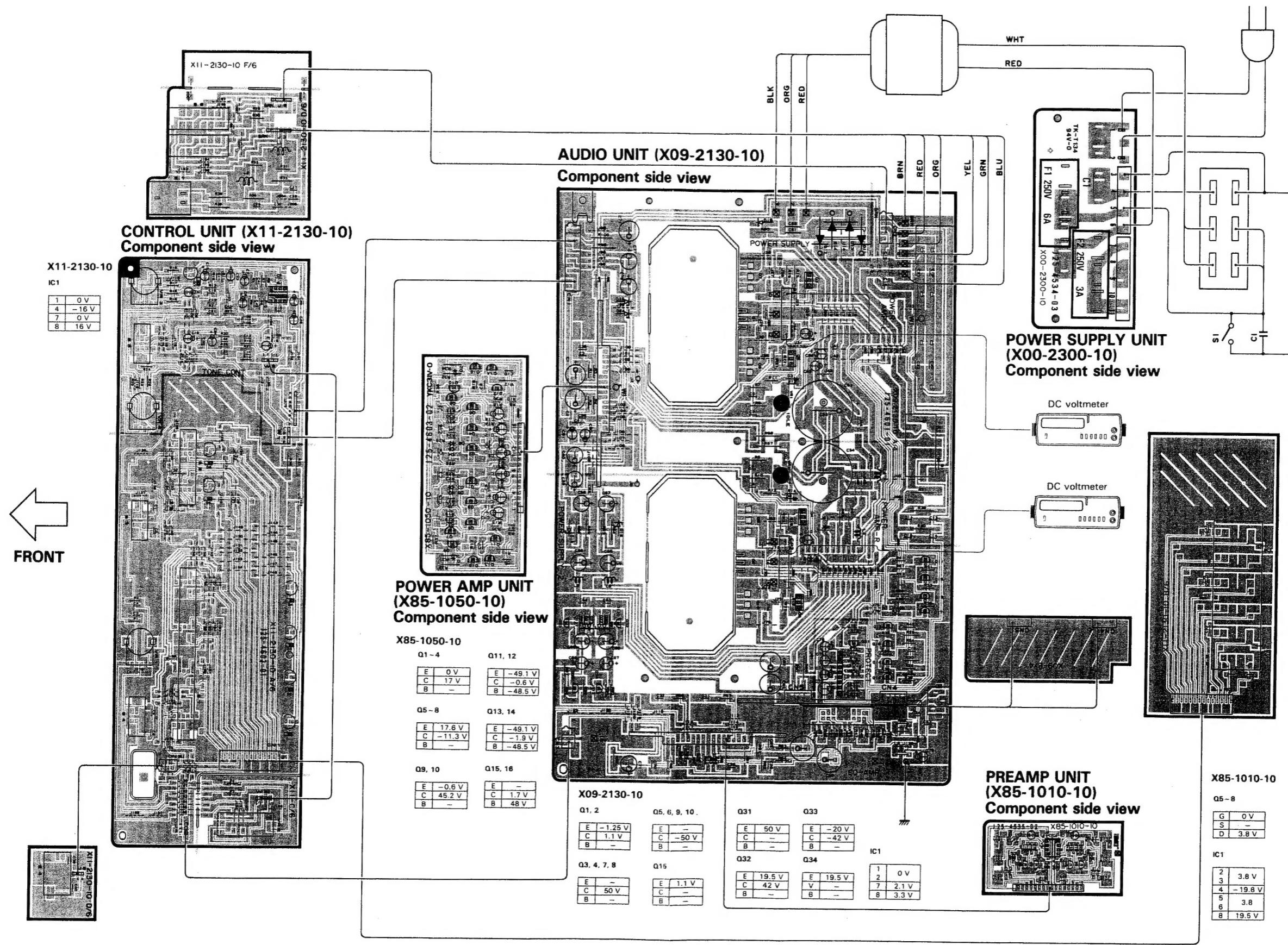
ABGLEICH

NR.	GEGENSTAND	EINGANGSEINSTELLUNG	AUSGANGSEINSTELLUNG	VORSTÄRKEREINSTELLUNG	ABGLEICH-PUNKTE	ABGLEICHEN FÜR	ABB.
1	LEERLAUFSTROM	-	Einen Gleichspannungsmesser über CP1 (L) CP2 (R) anschließen.	VOLUME: 0	VR1 (L) VR2 (R)	13mV	



KA-660 KA-660

PC BOARD



Refer to the schematic diagram for the values of resistors and capacitors.
The PC board drawing is viewing from the side easy to check.

KENWOOD

SPECIFICATION

EIA

Power Amplifier Section

Power Output

60 watts* per channel minimum RMS, both channels driven at 8 ohms from 20 Hz to 20,000 Hz with no more than 0.006% total harmonic distortion

Both Channels Driven into

8 ohms at 1 kHz..... 65 W + 65 W (Except USA,
Europe, and U.K.)

4 ohms at 1 kHz..... 90 W + 90 W (Except USA,
Europe, and U.K.)

Dynamic Power Output..... 145 watts at 4 ohms (Except
USA, Europe, Australia, and
U.K.)

Total Harmonic Distortion

(AUX—SPKR 8 Ω)

at Rated Output,
20 Hz ~ 20,000 Hz..... 0.006%

at 1/2 Rated Output,
20 Hz ~ 20,000 Hz..... 0.004%

at Rated Output, 1,000 Hz..... 0.003%

(PHONO—SPKR 8 Ω : at -20 dB VOLUME Level)

at Rated Output,
20 Hz ~ 20,000 Hz..... 0.006%

Intermodulation Distortion
(60 Hz:7 kHz = 4:1)..... 0.006% at rated power
into 8 ohms

Damping Factor 1,000, at 50 Hz into 8 ohms

Transient Response

Rise Time 3.5 μs
1 μs to 100 μs

Input Sensitivity/Impedance

Phono MM 2.5 mV/47 k ohms

Phono MC 0.2 mV/100 ohms

TUNER, AUX., TAPE PLAY,

CD 150 mV/47 k ohms

Signal-to-Noise Ratio (IHF-A)

Phono MM 86 dB for 2.5 mV input

Phono MC 68 dB for 250 μV input

TUNER, AUX., TAPE PLAY,

CD 107 dB

Maximum Input Level for Phono

MM 200 mV (RMS), T.H.D. 0.006%
at 1 kHz

MC 15 mV (RMS), T.H.D. 0.006%
at 1 kHz

Output Level/Impedance

TAPE REC (Pin) 150 mV/220 ohms

Frequency Response for Phono RIAA standard curve ±0.3 dB
(20 Hz to 20,000 Hz)

Tone Control

Bass ±10 dB at 100 Hz

Treble ±10 dB at 10 kHz

Loudness Control

(at -30 dB VOLUME Level) +9 dB at 100 Hz

Subsonic Filter 18 Hz, 6 dB/oct.

General

Power Consumption 220 W

AC Outlets Switched 2, Unswitched 1
(Except U.K., European,
Australian countries)

Dimensions W: 440 mm (17-5/16")
H: 133 mm (5-1/4")
D: 333 mm (13-1/8")

STEREO INTEGRATED AMPLIFIER

IEC

Power Amplifier Section

Rated Power Output

8 ohms at 20 Hz to 20,000 Hz no more than 0.006% THD (FTC).....	60 W + 60 W
4 ohms at 60 Hz to 12.5 kHz no more than 0.7% THD (IEC/NF).....	90 W + 90 W

Total Harmonic Distortion

Rated Power Output into 8 ohms.....	0.006%
Intermodulation Distortion.....	0.006%

Frequency Response.....	1 Hz ~ 100 kHz +0 dB, -3 dB
-------------------------	--------------------------------

S/N Weighted: Rated Output Power (IEC-A)

() = Unweighted at 50 mW (DIN)	
Phono MM	86 dB (55 dB)
Phono MC	68 dB (60 dB)
TUNER, AUX., TAPE PLAY, CD	107 dB (57 dB)

Damping Factor at 8 ohms, 50 Hz	1,000
---------------------------------------	-------

Transient Response

Rise Time	3.5 μ s
-----------------	-------------

Input Sensitivity/Impedance

Phono MM	2.5 mV/47 k Ω
Phono MC	0.2 mV/100 Ω
TUNER, AUX., TAPE PLAY, CD	150 mV/47 k Ω

Tone Control

Bass 100 Hz	\pm 10 dB
Treble 10 kHz	\pm 10 dB

Loudness Control (-30 dB).....	9 dB at 100 Hz
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General

Power Consumption

IEC	220 W
-----------	-------

Dimensions	W: 440 mm
------------------	-----------

H: 133 mm

D: 333 mm

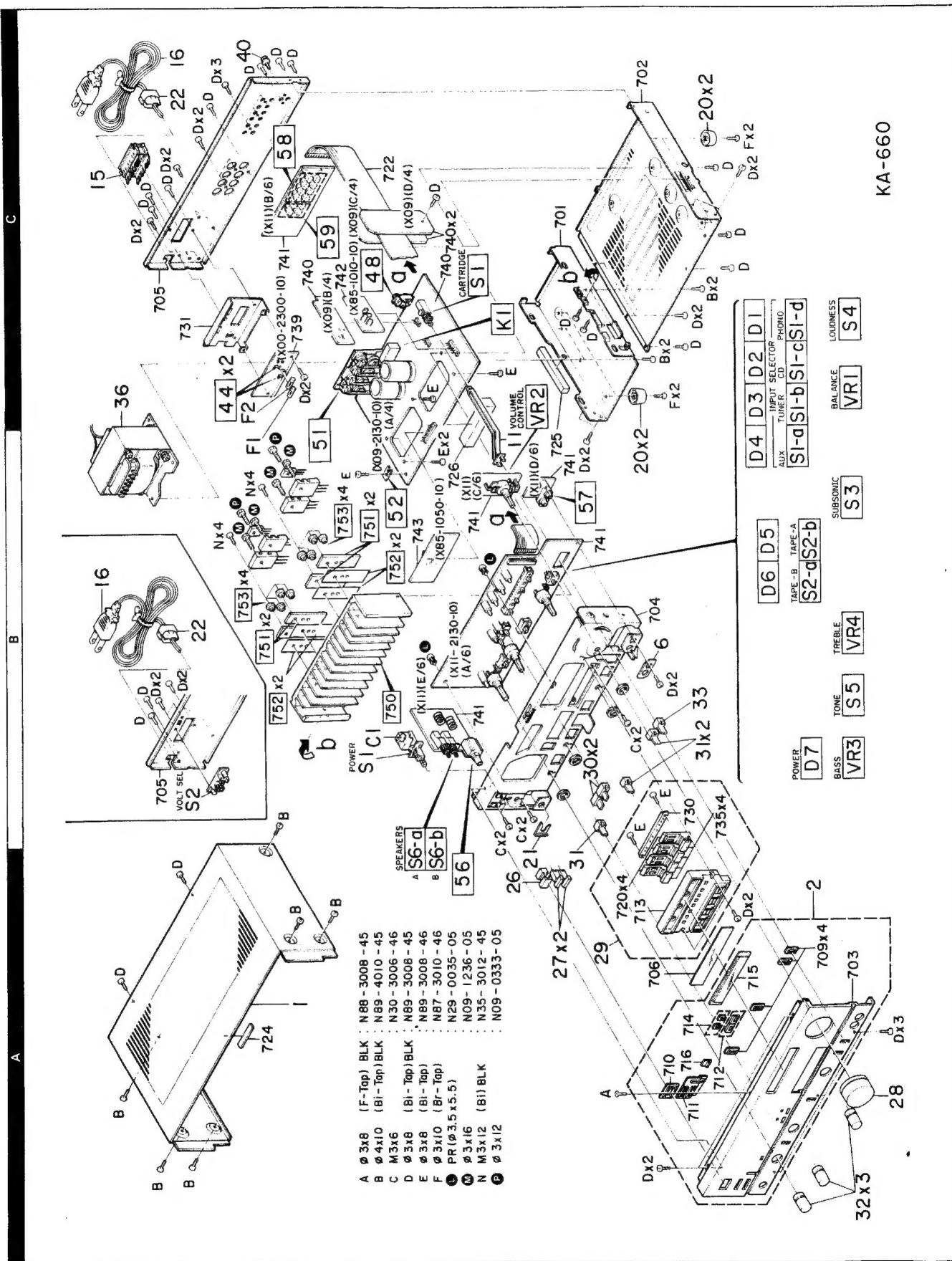
Weight (Net)	8.9 kg
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Kenwood follows a policy of continuous advancements in development. For this reason specifications may be changed without notice.

Kenwood poursuit une politique de progrès constants en ce qui concerne le développement. Pour cette raison, les spécifications sont sujettes à modifications sans préavis.

Kenwood strebt ständige Verbesserungen in der Entwicklung an. Daher bleiben Änderungen der technischen

EXPLODED VIEW



Parts with the exploded numbers larger than 700 are not supplied.

PARTS LIST

* New Parts

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Ref. No. 参照番号	Address 位 置	New Parts 新	Parts No. 部品番号	Description 部品名 / 規格	Desti- nation 仕 向	Re- marks 備考
KA-660						
1	1A	*	A01-1376-01	METALLIC CABINET	KPUM	
2	2A	*	A20-4366-02	PANEL ASSY	UEXE	
2	2A	*	A20-4366-02	PANEL ASSY	T	
2	2A	*	A20-4367-02	PANEL ASSY		
6	2B		B03-0229-14	DRESSING PLATE (FRNNT AUX)	K	
			B46-0092-03	WARRANTY CARD	UE	
			B46-0094-03	WARRANTY CARD	UE	
			B46-0095-03	WARRANTY CARD	X	
			B46-0096-13	WARRANTY CARD		
			B46-0121-03	WARRANTY CARD	P	
			B46-0122-13	WARRANTY CARD	E	
			B46-0123-03	WARRANTY CARD	T	
		*	B50-5502-00	INSTRUCTION MANUAL (ENGLISH)	KPUM	
		*	B50-5502-00	INSTRUCTION MANUAL (ENGLISH)	UEXE	
		*	B50-5503-00	INSTRUCTION MANUAL (FRENCH)	PMXE	
		*	B50-5504-00	INSTRUCTION MANUAL (SPANISH)	M	
		*	B50-5506-00	INSTRUCTION MANUAL (ENGLISH)	T	
		*	B50-5507-00	INSTRUCTION MANUAL (D,T,G)	E	
			B58-0222-14	CAUTION CARD (PRE-SET 220V)	UE	
			B58-0223-04	CAUTION CARD (PRE-SET 120V)	U	
			B58-0245-33	CAUTION CARD (FTZ)	E	
			B58-0269-04	CAUTION CARD	K	
			B59-0092-00	SERVICE DIRECTORY	UE	
△ C1	1B		C91-0023-05	CERAMIC 0.01UF	AC250V	UMUE
△ C1	1B		C91-0647-05	CERAMIC 0.01UF	P	KPXTE
11	2B		D21-1068-03	EXTENSION SHAFT		P
△ 15	1C		E03-0068-05	AC OUTLET		P
△ 15	1C		E03-0069-05	AC OUTLET		KUMUE
△ 16	1B, 1C		E30-0181-05	AC POWER CORD		K
△ 16	1B, 1C		E30-0459-05	AC POWER CORD		E
△ 16	1B, 1C		E30-0587-15	AC POWER CORD		T
△ 16	1B, 1C		E30-0812-05	AC POWER CORD		UMUE
△ 16	1B, 1C		E30-0974-05	AC POWER CORD		P
△ 16	1B, 1C		E30-1341-05	AC POWER CORD		X
△ F1	1B		F05-4022-05	FUSE (250V 4A)		UMUE
△ F1	1B		F05-4025-05	FUSE (SEMKO) (250V T4A)		E
△ F1	1B		F06-4024-05	FUSE (UL) (250V 4A)		KP
△ F2	1C		F05-2023-05	FUSE (250V 2A)		UMUE
△ F2	1C		F06-2021-05	FUSE (SEMKO) (250V T2A)		XTE
		*	H01-5321-04	ITEM CARTON CASE	KPUM	
		*	H01-5321-04	ITEM CARTON CASE	UEXE	
		*	H01-5322-04	ITEM CARTON CASE	T	
		*	H10-1770-02	POLYSTYRENE FOAMED FIXTURE		
		*	H10-1771-02	POLYSTYRENE FOAMED FIXTURE		
			H25-0224-04	PROTECTION BAG (800X400)		
			H25-0232-04	PROTECTION BAG (235X350)		
20	2B, 2C		J02-0127-05	FOOT		
21	2A		J21-3326-05	JACK MOUNTING HARDWARE		
22	1B, 1C		J42-0083-05	POWER CORD BUSHING		
			J61-0307-05	WIRE BAND		

E: Scandinavia & Europe H: Audio Club K: USA

P: Canada

S: South Africa

T: England

U: PX(Far East, Hawaii)

UE AAFES(Europe)

X: Australia

M: Other Areas

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Ref. No. 参照番号	Address 位 置	New Parts 新	Parts No. 部品番号	Description 部品名 / 規格			Desti- nation 仕 向	Re- marks 備考
26	2A		K27-1141-04	KNOB (BUTTON)	POWER			
27	2A		K27-0964-04	KNOB (BUTTON)	SPEAKERS			
28	2A		K29-1821-14	KNOB	VOLUME			
29	2B		K29-1978-03	KNOB ASSY(BTN)	INPUT SELECTOR			
30	2B		K29-1980-04	KNOB ASSY(BTN)	TAPE			
31	2A, 2B		K29-1982-04	KNOB ASSY(BTN)	TONE, SUB, LOUD			
32	2A		K29-1984-04	KNOB	BASS, TREBLE, BALANCE			
33	2B		K27-1398-04	KNOB (BUTTON)	CARTRIDGE			
▲ 36	1C	*	L01-6651-05	POWER TRANSFORMER			KP	
▲ 36	1C	*	L01-6652-05	POWER TRANSFORMER			XT	
▲ 36	1C	*	L01-6656-05	POWER TRANSFORMER			UMUEE	
40	1C		N08-0120-35	BINDING PNST	(GND)			
L	1B, 2B		N29-0035-05	PUSH RIVET	(Ø 3.5X5.5)			
▲ S1	1B		S40-1073-05	PUSH SWITCH	(POWER)			
▲ S2	1B		S31-2083-05	SLIDE SWITCH	(VOLTAGE SELECT)		UMUEE	
POWER SUPPLY UNIT (X00-2300-10)								
△ C1	1B		C91-0023-05	CERAMIC	0.01UF	AC250V	UMUE	
△ C1	1B		C91-0647-05	CERAMIC	0.01UF	P	KPXTE	
44	1C		J13-0041-05	FUSE CLIP			KPJM	
44	1C		J13-0041-05	FUSE CLIP			UE	
44	1C		J13-0054-05	FUSE CLIP			XET	
AUDIO UNIT (X09-2130-10)								
C1 ,2			CE04FW0J102M	ELECTRO	1000UF	6.3WV		
C3 ,4			CC45FSL1H180J	CERAMIC	1APF	J		
C5 -8			CC45FSL1H331J	CERAMIC	330PF	J		
C9 ,10			CE04FW1A220M	ELECTRO	22UF	10WV		
C11 -14			CF92FV1H393J	MF	0.039UF	J		
C15 ,16			CF92FV1H334J	MF	0.33UF	J		
C19 -22			CK45FF1H472Z	CERAMIC	4700PF	Z		
C23 ,24			CC45FSL1H221J	CERAMIC	220PF	J	XTE	
C25 ,26			CC45FSL1H101J	CERAMIC	100PF	J	KPJM	
C25 ,26			CC45FSL1H101J	CERAMIC	100PF	J	UE	
C25 ,26			CF45FSL1H121J	CERAMIC	120PF	J	XTE	
C27 ,28			CE04FW0J222M	ELECTRO	2200UF	6.3WV	XTE	
C31 -34			CK45FB1H102K	CERAMIC	1000PF	K	KPJM	
C31 ,32			CK45FB1H102K	CERAMIC	1000PF	K	UE	
C31 ,32			CK45FB1H102K	CERAMIC	1000PF	K		
C35 ,36			CC45FSL1H020C	CERAMIC	2.0PF	C		
C37 ,38			CF92FV1H104J	MF	0.10UF	J		
C51 ,52			CK45FE2H103P	CERAMIC	0.010UF	P		
C53 ,54			C90-0492-05	ELECTRO	10000UF	56WV		
C55 ,56		*	CE04FW1J330M	ELECTRO	33UF	63WV		
C57 ,58			CE04FW1H470M	ELECTRO	47UF	50WV		
C59 ,60			CE04FW1E101M	ELECTRO	100UF	25WV		
C61 ,62			CE04FW1J101M	ELECTRO	100UF	63WV		
C63 ,64			CF92FV1H103J	MF	0.010UF	J		
C65 ,66			CE04FW1E101M	ELECTRO	100UF	25WV		
C67 ,68			CE04FW1E470M	ELECTRO	47UF	25WV		
C69 ,70			CF92FV1H103J	MF	0.010UF	J		
C71			CE04FW1E101M	ELECTRO	100UF	25WV		
C72			CE04FW1J101M	ELECTRO	100UF	63WV		
C73			CE04FW1C470M	ELECTRO	47UF	16WV		

E: Scandinavia & Europe H: Audio Club K: USA

P: Canada

S: South Africa

T: England

U: PX(Far East, Hawaii)

UE AAFES(Europe)

X: Australia

M: Other Areas

6

△ indicates safety critical components.

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C74			CEO4FW1V4R7M	ELECTRN	4.7UF	35WV			
C75			CEO4HW1E100M	NP-ELEC	10UF	25WV			
C76			CEO4FW1A220M	ELECTRN	22UF	10WV			
C77 ,78			CEO4FW1E101M	ELECTRN	100UF	25WV			
C79			CEO4FW1H0R1M	ELECTRN	0.1UF	50WV			
C80 ,81		*	CEO4FW2AR22M	ELECTRN	0.22UF	100WV			
C82			CF92FV1H223J	MF	0.022UF	J			
C83 ,84			CEO4FW2A010M	ELECTRN	1.0UF	100WV			
48	1C		E13-0217-05	PHONE JACK	(2P)	PHONE			
51	1B		E20-0821-05	LOCK TERMINAL	BOARD(8P)	SP			
52	1B		E23-0125-05	TERMINAL	(GND)				
L1 ,2			L40-1011-47	SMALL FIXED INDUCTOR(100UH,K)				XTE	
L3 -6			L40-1011-14	SMALL FIXED INDUCTOR(100UH,K)					
M	1B		N09-1236-05	TAPPING SCREW	(Ø3X16)				
P	1B		N09-0333-05	TAPPING SCREW	(Ø3X12)				
CP1 ,2			R90-0187-05	MULTI-COMP	0.22X2	K	5W		
R7 -10			RD14AB2E101J	FL-PROOF RD	100	J	1/4W		
R15 -18			RD14AB2E101J	FL-PROOF RD	100	J	1/4W		
R19 -22			RD14AB2E4R7J	FL-PROOF RD	4.7	J	1/4W		
R27 -30		*	RD14AB2E102J	FL-PROOF RD	1.0K	J	1/4W		
R39 ,40			RS14DB3D4R7J	FL-PROOF RS	4.7	J	2W		
R71		*	RS14DB3D152J	FL-PROOF RS	1.5K	J	2W		
R80			RD14AB2E100J	FL-PROOF RS	10	J	1/4W		
R81 ,82			RD14AB2E4R7J	FL-PROOF RD	4.7	J	1/4W		
R83 ,84			RS14DB3A561J	FL-PROOF RS	560	J	1W		
R85 ,86			RS14DB3A102J	FL-PROOF RS	1.0K	J	1W		
R87 ,88		*	RS14DB3D182J	FL-PROOF RS	1.8K	J	2W		
R89 ,90			RS14DB3D331J	FL-PROOF RS	330	J	2W		
R95			RD14AB2E4R7J	FL-PROOF RD	4.7	J	1/4W		
R98			RD14AB2E101J	FL-PROOF RD	100	J	1/4W		
R99			RS14DB3D102J	FL-PROOF RS	1.0K	J	2W		
R100		*	RS14DB3A103J	FL-PROOF RS	10K	J	1W		
VR1 ,2			R12-0094-05	TRIMMING POT. (470) IDLE ADJ					
K1	2C		S51-2060-05	MAGNETIC RELAY					
S1	1C		S40-6027-05	PUSH SWITCH (MC/MM)					
D1 ,2			ISS131	DIODE					
D1 ,2			ISS178	DIODE					
D3 ,4			MA27W(A)	VARISTOR					
D11 -14			S3V20	DIODE					
D15			DSM1A1	DIODE					
D16 ,17			ISS131	DIODE					
D16 ,17			ISS178	DIODE					
D18		*	RD22JS(B)	ZENER DIODE					
D19		*	RD20JS(B2)	ZENER DIODE					
D20 ,21			E-272	CONSTANT CURRENT DIODE					
D22 ,23		*	RD20JS(B2)	ZENER DIODE					
D24 ,25		*	RD16E(B)	ZENER DIODE					
IC1			UPC1237H	IC(PROTECTION)					
Q1 ,2		*	2SC3419(Y)	TRANSISTOR					
Q3 ,4			2SC2591(Q,R,S)	TRANSISTOR					
Q5 ,6			2SA1111(Q,R,S)	TRANSISTOR					
Q7 ,8		*	2SC3280*5	TRANSISTOR					

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P: Canada

S: South Africa

T: England

U: PX(Far East, Hawaii)

UE: AAFES(Europe)

X: Australia

M: Other Areas

▲ indicates safety critical components.

PARTS LIST

* New Parts

Parts without Parts No. are not supplied.

Les articles non mentionnés dans le Parts No. ne sont pas fournis.

Telle ohne Parts No. werden nicht geliefert.

Ref. No. 参照番号	Address 位 置	New Parts 新	Parts No. 部品番号	Description 部品名／規格	Desti- nation 仕 向	Re- marks 備考
A 09 ,10 011 ,12 011 ,12 013 ,16 013 ,16 017 ,18 Q31 Q32 Q33 Q34 ,35 Q34 ,35		*	2SA1301*5 2SC2320(E,F) 2SC945(A)(O,P) 2SA733(A)(O,P) 2SA999(E,F) 2SC2631(O,R,S) 2SA992(F,E) 2SD882(O,P) 2SB772(O,P) 2SA733(A)(O,P) 2SA999(E,F)	TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR		
CONTROL UNIT (X11-2130-10)						
D1 ,4 D5 ,6 D7	2B,2C 2B 2B		B30-0431-05 B30-0432-05 B30-0431-05	LED(LN21CPH) INPUT SELECTOR LED(LN316CPH(U))TAPE A/B LED(LN21CPH) POWER		
C1 ,2 C3 ,4 C5 ,6 C7 ,8 C9 ,10			CF92FV1H224J CC45FSL1H101J CF92FV1H273J CE04FW1H010MEL CC45FSL1H150J	MF CERAMIC MF ELECTRO CERAMIC	0.22UF 100PF 0.027UF 1.0UF 15PF	J J J 50WV J
C11 ,14 C15 ,18 C19 ,22 C23 ,26 C27 ,30			CF92FV1H334J CE04FW1E100MEL CF92FV1H223J CED4FW1H010MEL CF92FV1H393J	MF ELECTRO MF ELECTRO MF	0.33UF 10UF 0.022UF 1.0UF 0.039UF	J 25WV J 50WV J
C27 ,28 C27 ,28 C31 ,40 C41 ,42 C43 ,44			CF92FV1H183J CF92FV1H183J CC45FSL1H151J CC45FSL1H101J CK45FB1H561K	MF MF CERAMIC CERAMIC CERAMIC	0.018UF 0.018UF 150PF 100PF 560PF	J J J J K
56 57 58 59	1A 2B 1C 1C		E11-0104-15 E13-0213-05 E13-0818-05 E13-0496-05	PHONE JACK (3P) PHONE JACK (2P) PHONE JACK (8P) PHONE JACK (4P)	PHONES AUX CD,TUNER,TAPE A TAPE B	KPUM UE XTE
L1 ,2			L39-0080-15		PHASE-COMPENSATION COIL	
R29 ,30 R31 ,32 R33 ,34 R35 ,36 R37		*	RD14AB2E330JTS RD14AB2E4R7JTS RS14DB3D100J RS14DB3D561J RS14DB3D222J	FL-PROOF RD FL-PROOF RD FL-PROOF RS FL-PROOF RS FL-PROOF RS	33 4.7 10 560 2.2K	J 1/4W J 1/4W J 2W J 2W J 2W
R38 VR1 VR2 VR3 ,4			RS14DB3D182J R06-5134-05 R06-5135-05 R06-3048-05	FL-PROOF RS POTENTIOMETER(200KX2) POTENTIOMETER(100KX2) POTENTIOMETER(10KX2)	1.8K BALANCE VOLUME TONE	2W 2W 2W 2W
S1 S2 S3 ,5 S6	2B,2C 2B 2B,2C 1A	*	S42-4044-05 S42-2126-05 S40-2200-05 S42-2125-05	MULTI-PUSH SWITCH MULTI-PUSH SWITCH PUSH SWITCH MULTI-PUSH SWITCH	INPUT TAPE SUB,LOUD-TONE SPEAKER	
IC1			NJM4558D(A)	IC(8P AMP X2)		
PREAMP UNIT (X85-1010-10)						
C1 ,2 C3 ,4			CF92FV1H392J CF92FV1H113J	MF MF	3900PF 0.011UF	J J

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indicates safety critical components.

PARTS LIST

× New Parts

Parts without Parts No. are not supplied.

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Teile ohne Parts No. werden nicht geliefert.

Ref. No. 参照番号	Address 位 置	New Parts 新	Parts No. 部品番号	Description 部品名 / 規格			Desti- nation 仕向	Re- marks 備考
C5 ,6 C7 ,8			CF92FV1H393J CEO4HW1E100MEL	MF NP-ELEC	0.039UF 10UF	J 25WV		
R7 ,8 R9 ,10	*	*	RN14BK2C6811FTS RN14BK2CB252FTS	RN RN	6.81K 82.5K	F F	1/6W 1/6W	
IC1 Q5 -8 Q5 -8			NJM4560D-N 2SK170(BL) 2SK170(V)	IC(8P AMP X2) FET FET				

POWER AMP UNIT (X85-1050-10)

C1 ,2 C3 -6 C7 ,8 C9 ,10 C11 -14		CEO4FW1H2R2MEL CC45FSL1H101J CC45FSL1H331J CC45FSL1H150J CEO4FW1H010MEL	ELECTRO CERAMIC CERAMIC CERAMIC ELECTRO	2.2UF 100PF 330PF 15PF 1.0UF		50WV		
C15 ,16 C17 ,18		CK45FB1H152K CK45B1HS61K	CERAMIC CERAMIC	1500PF 560PF		K		
R11 ,12 R31 -34		RD14AB2E101JTS RD14AB2E221JTS	FL-PR00F RD FL-PR00F RD	100 220	J J	1/4W 1/4W		
D1 -6 D1 -6 Q1 -4 Q5 -8 Q5 -8		1SS133 1SS176 2SC1845(F,E) 2SA733(A)(Q,P) 2SA999(E,F)	DIODE DIODE TRANSISTOR TRANSISTOR TRANSISTOR					
Q9 -14 Q15 ,16		2SC2632(Q,R,S) 2SA1124(Q,R,S)	TRANSISTOR TRANSISTOR					

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U: PX(Far East, Hawaii)

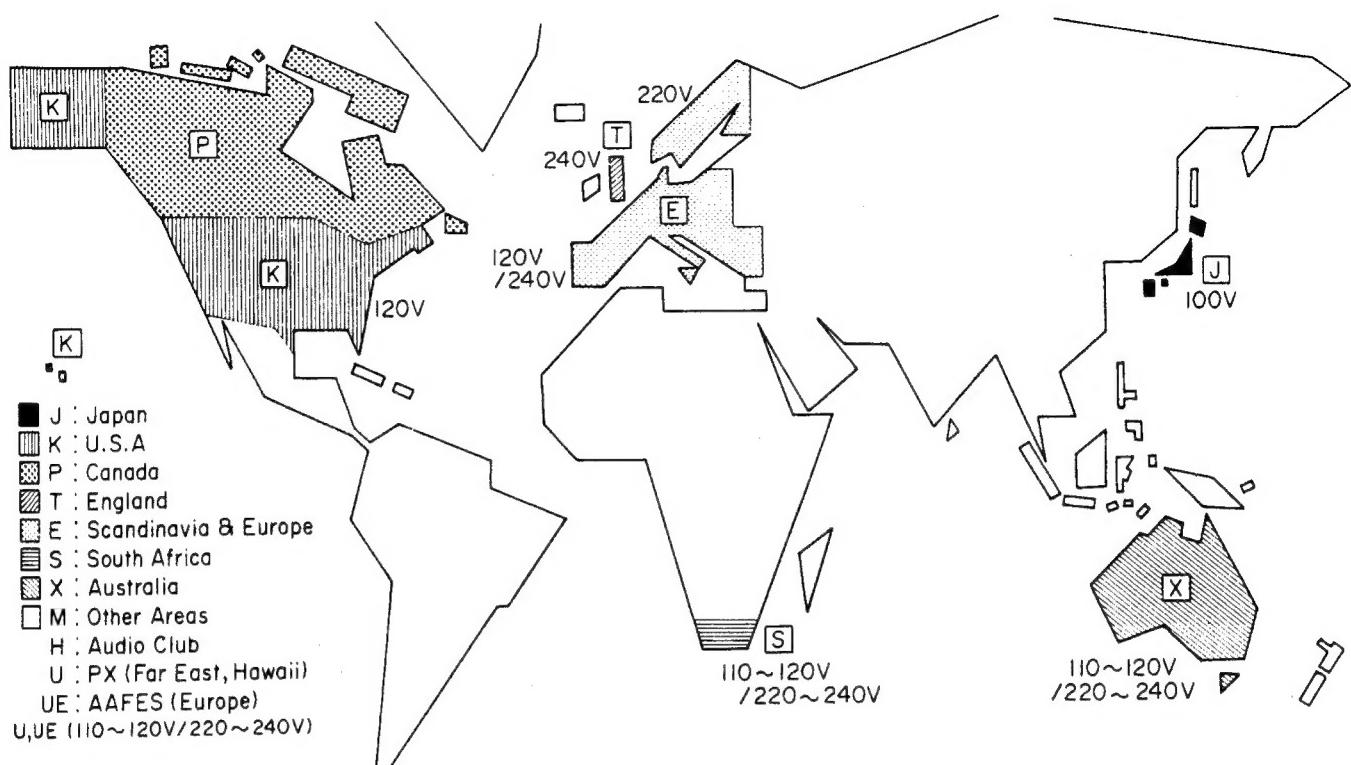
UE: AAFES(Europe)

X: Australia

M: Other Areas

⚠ indicates safety critical components.

WORLD MAP & AREA CODE

**Note:**

Component and circuitry are subject to modification to insure best operation under differing local conditions. This manual is based on, the U.S. (K) standard, and provides information on regional circuit modification through use of alternate schematic diagrams, and information on regional component variations through use of parts list.

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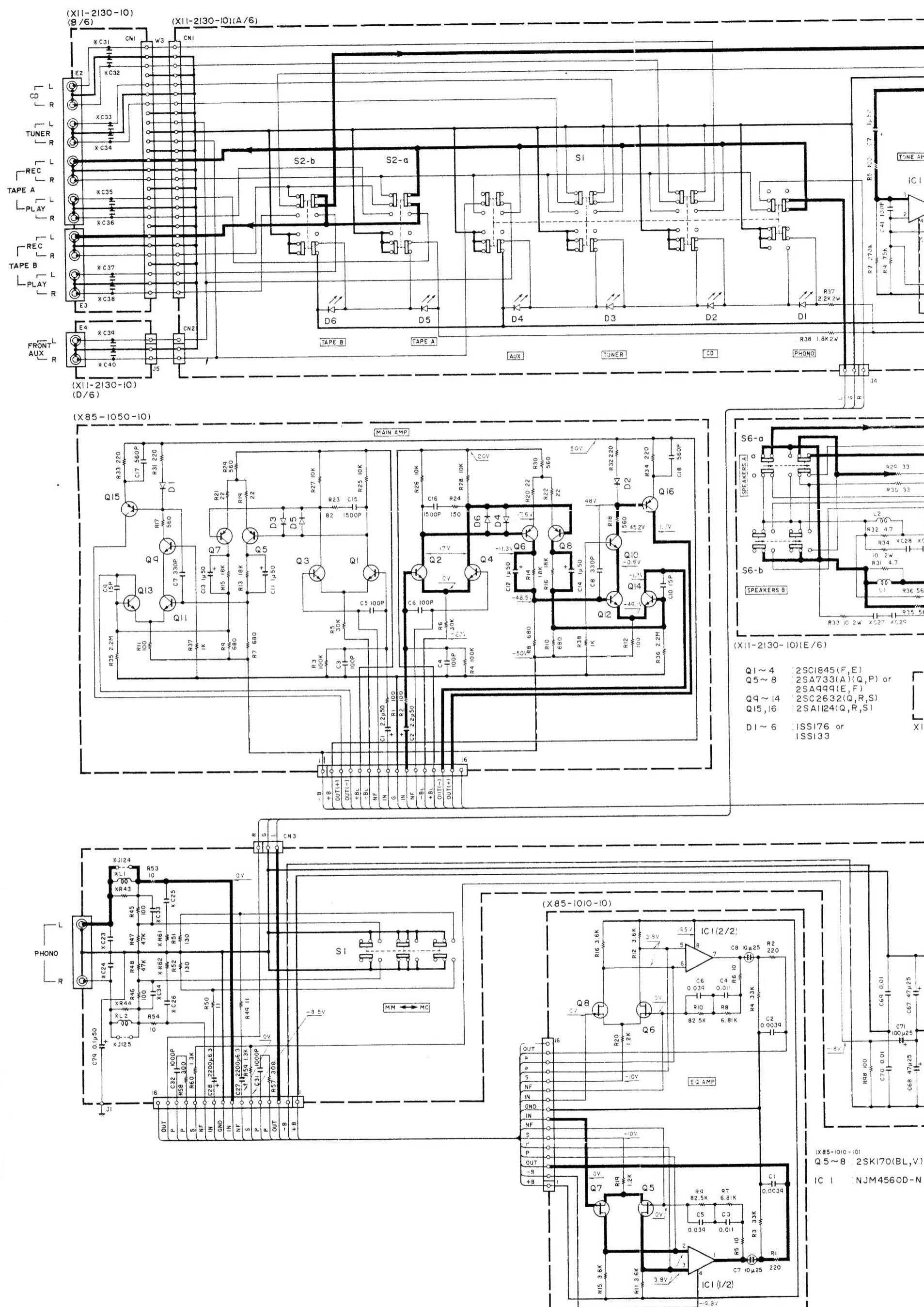
TRIO-KENWOOD ELECTRONICS, N.V.
Leuvensesteenweg 504 B-1930 Zaventem, Belgium

TRIO-KENWOOD ELECTRONICS GmbH
Rembrücker Str. 15, 6056 Heusenstamm, West Germany

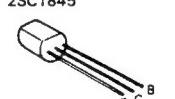
TRIO-KENWOOD FRANCE S.A.
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2SA1124 2SC2320
2SA733 (A) 2SC2631
2SA992 2SC2632
2SA999 2SC945 (.
2SC1845



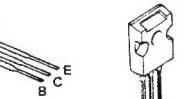
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2SD882



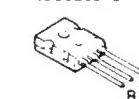
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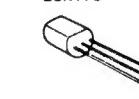
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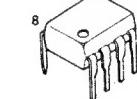
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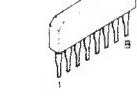
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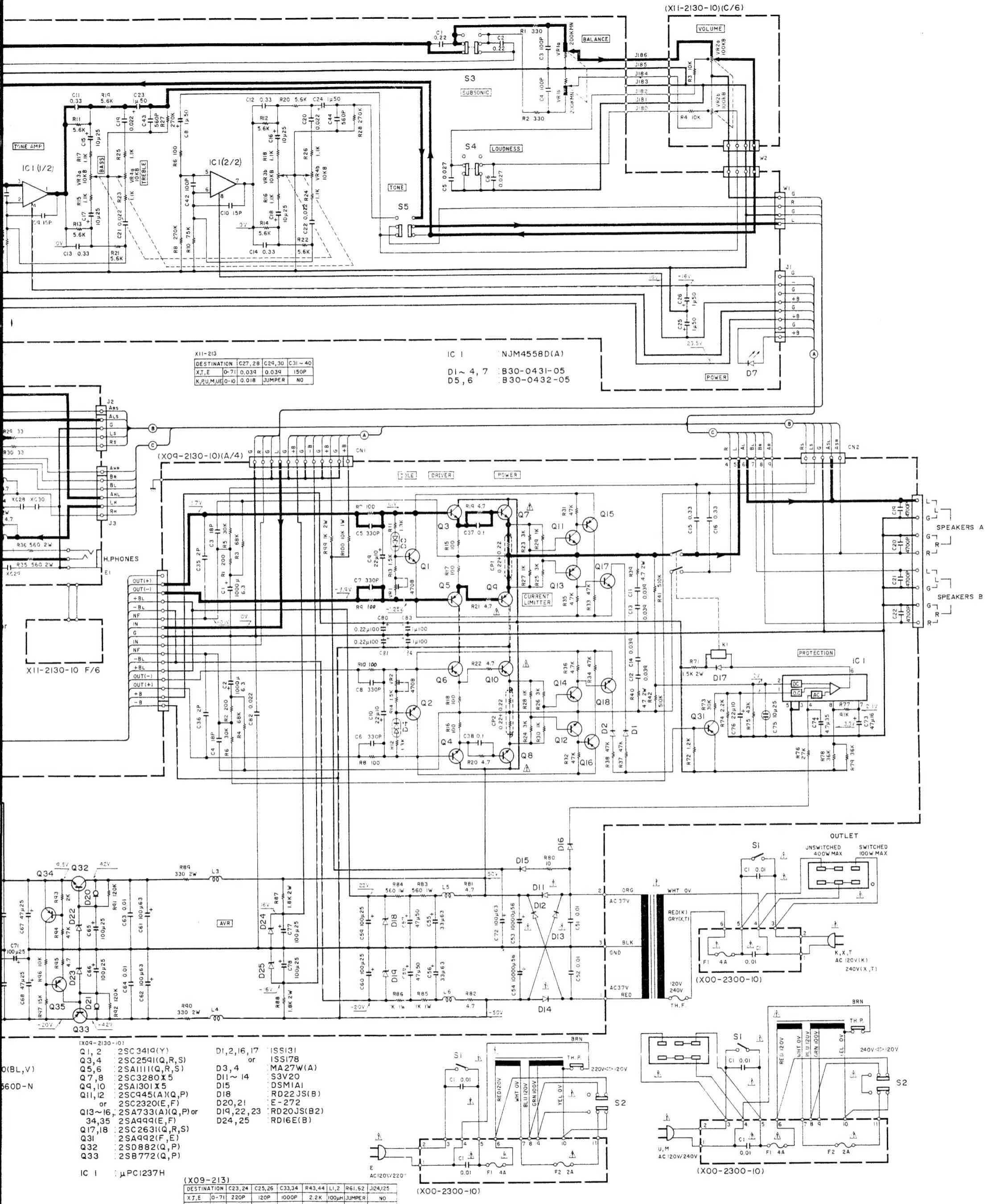


NJM4558D (A)
NJM4560D-N
5



μ PC1237H





DC voltages are measured with a high impedance voltmeter with no signal input. Readings may vary slightly due to variations between individual instruments or units used.

Les tensions DC doivent être mesurées avec une haute impédance sans signal d'entrée. Les valeurs peuvent différer légèrement du fait des variations inhérentes aux appareils et aux instruments de mesure individuels.

DC voltages are measured with a high impedance voltmeter with no signal input. Readings may vary slightly due to variations between individual instruments or units used.

CAUTION: For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list).

Indicates safety critical components. To reduce the risk of electric shock, leakage-current or resistance measurements shall be carried out (exposed parts are acceptably insulated from the supply circuit) before the appliance is returned to the customer.

KA-660 (K)

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